

**REMARKS**

Claims 1-20 are pending. Claims 1, 11 and 19 are independent.

Reconsideration of this Application in light of the remarks set forth below is respectfully requested.

**Personal Interview**

Applicants thank Examiner Husband for the courtesies extended to Mr. Robert J. Webster, their representative, during the personal interview conducted on November 2, 2006. During that interview, Examiner Husband agreed that the assertion of proper motivation to modify Jenkins in view of Charland in the outstanding Office Action was overcome by Applicants' arguments, and that the assertion of proper motivation to modify the Jenkins-Charland reference combination based on Love in the outstanding Office Action was overcome by Applicants' arguments. In this regard, Examiner Husband agreed that (1) Charland's fluid mixing valve can be considered a water circulation device based on its disclosure in col. 2, lines 36-49, that the flow of steam outward through venturi nozzle 24 will produce a suction of water from the annular water chamber toward the heated water outlet 21, and (2) that Jenkins disclosed a venturi type water pump but not the claimed back current preventing branch unit.

The election of species requirement was also discussed. Examiner Husband agreed to reconsider that requirement and the withdrawal of claims 8-18 from consideration based on the arguments presented, which were those of record in the Amendment filed on June 26, 2006.

### **Election of Species Requirement**

Applicants continue to traverse the election of species requirement for the following reasons.

Applicants respectfully submit that any claim, including claims 2-7, which have been examined on their merits, and claims 8-10, that depend from claim 1, have to be examined with the elected species. The attention of the Examiner is directed to MPEP § 806.04(f) which points out that claims to be restricted to species must be mutually exclusive, i.e., for claims to be properly restricted to different species, those claims must recite the mutually exclusive characteristics of such species. Because claims 8-10 depend from claim 1, which is directed to the elected species, and claims 8-10 recite all the of the features of claim 1, then claims 8-10 recite features of the elected species and are not mutually exclusive from claim 1 because of this. Accordingly, claims 1 and 8-10 (along with claims 2-7) are not mutually exclusive and must be examined together.

In addition, upon further consideration, Applicants respectfully submit that independent claim 11 reads on the elected species (embodiment of Figs. 2-6), as indicated, below:

11. (Original) A washing machine (shown, e.g., in Fig. 2) comprising:
  - a steam generator (24) for generating steam;
  - a circulation pump (28) for pumping circulation water discharged from a tub (14) and re-supplying the circulation water into a drum (16); and
  - a spray device (26) connected to the steam generator by a steam supply unit (34) and to a

circulation pump (28) by a circulation line (38) so as to spray steam or circulation water into the drum (16),

wherein the spray device (16) comprises:

a main body (30) connected to the steam supply line and the circulation line;

a spray unit (26) formed at an end portion of the main body and spraying steam or circulation water into the drum (16) ;

a steam passage (50) formed inside the main body and supplying steam introduced through the steam supply line (34) to the spray unit (26); and

a circulation water passage (52) formed inside the main body and supplying circulation water introduced through the circulation line (38) to the spray unit (26).

Moreover, dependent claims 12-18 have to be examined along with independent claim 11 because they are dependent claims that recite each and every feature of claim 11 and, thus, are not mutually exclusive from claim 11 – see MPEP § 806.04(f), discussed above.

In response to these previously presented arguments, the outstanding Office Action states that the different species are mutually exclusive as shown in the figures. Applicants respectfully submit that this argument is not relevant to whether the claimed inventions are mutually exclusive because it overlooks the fact that what is in issue in the election of species requirement is the claimed invention and whether the claims read on the elected species. In this regard, note is made of MPEP §806.01, which states that, “it is the claimed subject matter that is considered and such claimed subject matter must be compared in order to determine the question of distinctness or independence.”

The response also states that Applicant specifically indicated which claims corresponded to the elected species and because of this, the other claims do not read on the elected species. Applicants respectfully submit that Applicant's initial determination of what claims read on the elected species was incorrect with respect to claim 11, for reasons stated on page 13 of the Amendment filed on June 26, 2006, and Applicant believes that the Examiner should consider those reasons on their merits instead of imposing an estoppel against Applicant on correcting the record. In this regard, Applicants respectfully submit that it can find no basis for such an estoppel in the Manual of Patent Examining Procedure (MPEP).

Accordingly, Applicants respectfully request that the election of species requirement be withdrawn and claims 8-18 be examined on their merits along with claims 1-7, which have already been examined on their merits.

### **Rejections under 35 U.S.C. §103**

Claims 1-4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over GB 21286 to Jenkins in view of U.S. Patent 4,311,160 to Charland. This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

Because the rejection is based on 35 U.S.C. §103, what is in issue in such a rejection is "the invention as a whole," not just a few features of the claimed invention. Under 35 U.S.C. §103, "[a] patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious

at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." The determination under §103 is whether the claimed invention as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. See In re O'Farrell, 853 F.2d 894, 902, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988). In determining obviousness, the invention must be considered as a whole and the claims must be considered in their entirety. See Medtronic, Inc. v. Cardiac Pacemakers, Inc., 721 F.2d 1563, 1567, 220 USPQ 97, 101 (Fed. Cir. 1983).

In rejecting claims under 35 U.S.C. §103, it is incumbent on the Examiner to establish a factual basis to support the legal conclusion of obviousness. See, In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. F-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a *prima facie* case of obviousness. Note, In re Oetiker, 977 F.2d 1443, 1445, 24

USPQ2d 1443, 1444 (Fed. Cir. 1992). The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be suggested or taught by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1970). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

A suggestion, teaching, or motivation to combine the prior art references is an “essential evidentiary component of an obviousness holding.” C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not “evidence.” See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617 (Fed. Cir. 1999).

Moreover, it is well settled that the Office must provide objective evidence of the basis used in a prior art rejection. A factual inquiry whether to modify a reference must be based on objective evidence of record, not merely conclusory statements of the Examiner. See, In re Lee, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002).

Furthermore, during patent examination, the PTO bears the initial burden of presenting a *prima facie* case of unpatentability. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). If

the PTO fails to meet this burden, then the Applicant is entitled to the patent. Only when a *prima facie* case is made, the burden shifts to the applicant to come forward to rebut such a case.

Applicants respectfully submit that this rejection is improper for a number of reasons.

Jenkins does not disclose the claimed combination including the positively recited back-current preventing branch unit features. At best, Jenkins discloses a rather complex trunnion arrangement with various separate fittings including (1) a “gland and stuffing box F, (2) a stationary pipe G, (3) a pipe H<sup>1</sup>, and (4) a separate cock G<sup>3</sup> located in a separate pipe G<sup>1</sup>.

Moreover, with respect to its Fig. 3 embodiment, Jenkins discloses only two alternatives. The first, found on pages 3, lines 10-19, is using a steam-jet injector to draw liquid up from pipe G<sup>1</sup> and forcing the liquid drawn up from pipe G<sup>1</sup> through the hollow trunnion C<sup>1</sup> into the chamber D and perforated pipes E. The second alternative, disclosed on page 3, lines 20-24, is not to force the liquid drawn up from pipe G<sup>1</sup> through the hollow trunnion C<sup>1</sup> into the chamber D and perforated pipes E but just force steam through the pipes. To accomplish this, Jenkins provides a cock (a hand operated valve) G<sup>3</sup> in the pipe G<sup>1</sup> so that the liquid from the tank A will be prevented from rising in the pipe G<sup>1</sup> and only steam from the nozzle will pass into the chamber D.

Applicants find no disclosure in Jenkins of providing a back-current preventing branch unit to prevent the recirculating liquid in the pipe G<sup>1</sup> from flowing back into a steam supply line and to prevent steam from flowing back to the circulation line. In fact, it appears that Jenkins' steam injector will continue to draw liquid from the recirculation line G<sup>1</sup> that is above the cock after the cock is closed due to a Venturi effect that serves as the basis for drawing the liquid from

the recirculation line into the trunnion, and that Jenkins' steam would not flow into recirculation line G<sup>1</sup> because Jenkins uses a steam injector.

In order to overcome the shortcomings of Jenkins, the Office Action turns to Charland.

Charland discloses a fluid mixing valve "adapted to mix steam and water to operate a liquid nozzle gun."- see the first sentence of the Abstract. The objects of Charland's invention are to "prevent burns by the steam, to minimize waste of steam, and to minimize the occurrence of water hammers resulting from mixing steam with water" – see the Abstract. Charland's mixing valve is actually a water pump that uses steam to pump water using suction from a venturi nozzle – see col. 2, lines 42-49. Applicants are unable to locate where Charland discloses the claimed back-current preventing branch unit of claim 1. Moreover, Examiner Husband was not able to point out, during the aforementioned interview, where Charland discloses such a feature.

Applicants respectfully submit that Charland's mixing valve is just a device that heats and pumps water using a venturi nozzle and, even if the Office Action provided objective factual evidence that one of ordinary skill in the art were properly motivated to modify Jenkins in view of Charland (which it has not done for reasons discussed below), the resulting modified version of Jenkins would still not disclose or suggest or otherwise render obvious the invention recited in independent claims 1 or 19, including the claimed back current prevention unit.

The Office Action speculates that Charland's Abstract discloses that Charland's fluid mixing valve is a back current prevention unit that prevents the backflow mixing of steam and water. Unfortunately, the Office Action never points out what elements of Charland accomplish



this. Applicants respectfully submit that all that Charland's mixing unit does is mix water and steam to provide heated water and pumps that water using a venturi nozzle to a heated water chamber 22, while using a check valve 18 to "delay or slow down the flow of steam until after opening of the valve 11 and thus until after the starting of the flow of water." – see col. 3, lines 2-5.

The Office Action also speculates that it would have been obvious to modify Jenkins with Charland "for the benefit of better controlling the addition of steam and water and preventing unwanted mixing."

Applicants respectfully disagree for a number of reasons.

Firstly, Jenkins and Charland do not address or solve the same problem. Jenkins either provides steam alone to its laundry (page 3 lines 20-25), or a combination of steam and recirculated wash water (Fig. 3) using the steam as a venturi pump (page 3, lines 10-19) to wash clothes in a drum. Charland does not wash laundry in a drum and does not provide steam alone to wash whatever it is used to wash. In fact, Charland explicitly teaches not using steam alone to clean anything, and uses its steam solely to heat water that it gathers in mixing chamber 22. Because Charland does not use steam alone to clean anything and provides complicated valving arrangements, including check valve 18 and flow regulator valve (including sleeve valve 32), to prevent the use of steam to clean anything or to cause burns to users of a water gun, one of ordinary skill in the art would not have any proper motivation to modify Jenkins and replace Jenkins' Fig. 3 steam and recirculating water sources with Charland's mixing unit – because it would result in eliminating the steam alone as a cleaning source, thereby frustrating one of the

disclosed advantages of Jenkins. This fact actually teaches away from the proposed modification of Jenkins by Charland. As pointed out in the amendment filed on June 26, 2006, a reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. The degree of teaching away will of course depend on the particular facts; in general, a reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant. See W.L. Gore & Assoc., Inc. v. Garlock, Inc., 721 F.2d 1540, 1550-51, 220 USPQ 303, 311 (Fed. Cir. 1983) (the totality of a reference's teachings must be considered), cert. denied, 469 U.S. 851 (1984); In re Sponnoble, 405 F.2d 578, 587, 160 USPQ 237, 244 (CCPA 1969) (references taken in combination teach away since they would produce a "seemingly inoperative device"); In re Caldwell, 319 F.2d 254, 256, 138 USPQ 243, 245 (CCPA 1963) (reference teaches away if it leaves the impression that the product would not have the property sought by the applicant). See, In re Gurley, 31 USPQ2d 1130 (Fed. Cir. 1994).

Secondly, Charland does not disclose the allegedly desired feature of "preventing unwanted mixing" of steam and water. In fact, Charland actually provides a mixing unit that promotes mixing of steam and water. If steam and water are not mixed, then Charland curtails the introduction of steam into the water and steam mixing area. Thus, the stated reason why one of ordinary skill in the art would be motivated to combine these two references "for the benefit of . . . preventing unwanted mixing" is not found in Charland. Nor is it found in Jenkins.

For these reasons, Applicants respectfully submit that the Office Action fails to make out a *prima facie* case of proper motivation to modify Jenkins in view of Charland, as suggested, and that even if these references were combined, as suggested, they would not result in, or otherwise render obvious the claimed invention, which, for claims 1-4, includes a back-current preventing branch unit connected to the steam generator by a steam supply line, connected to the circulation pump by a circulation line, and connected to the spray nozzle, so as to prevent circulation water supplied to the spray nozzle from flowing back to the steam supply line or steam supplied to the spray nozzle from flowing back to the circulation line; and for claims 19 and 20, includes a back-current preventing branch unit connected to the steam generator by a steam supply line, connected to the circulation pump by a circulation line, and connected to the single spray nozzle, so as to prevent circulation water supplied to the spray nozzle from flowing back to the steam supply line or steam supplied to the spray nozzle from flowing back to the circulation line.

Furthermore, neither of the disclosed references disclose or suggest the following claimed features: (1) the back-current receiving plate of claim 2; (2) the back-current receiving plate rotated by a hinge pin of claim 3; (3) the tightly attaching protrusion of claim 4; (4) the flange unit engaged with the nozzle connection unit or the guide unit recited in claim 5; (5) the horizontal spray angle of the spray nozzle of claim 6; (6) the vertical angle spray of the spray nozzle of claim 7; or (7) the unitary structure recited in claim 20.

In an attempt to remedy these deficiencies, the Office Action alleges that the specific flap valve and valves are well known in the art and one of ordinary skill in the art would foresee the substitution of any such structure to provide this function, because “[T]he courts have ruled that

the substitution of known equivalent structures is obvious,” citing *In re Fout*, 213 USPQ 532 (CCPA 1982).

Unfortunately, the Office Action does not provide any objective factual evidence of what these “known equivalent structures” are, as required by the aforementioned case law, e.g., the above-cited “*In re Lee*” decision but effectively takes official notice of the existence of “known equivalent structures.”.

Applicants respectfully submit that official notice of anything, including “known equivalent structures,” can only be taken of facts of notorious character and serve only to “fill in the gaps” of a rejection “in an insubstantial manner.” It is never appropriate to rely on common knowledge in the art without evidentiary support in the record as the principal evidence upon which a rejection was based. – see MPEP §2144.03, last paragraph. In this situation, the Office Action improperly takes Official Notice of the principal evidence on which to base the entire rejection of claims 2-4 and 20.

Moreover, applicants respectfully submit that even if equivalent structures exist (none of which has been explained or supported by objective factual evidence) are known to of ordinary skill in the art, this reliance on such “known equivalent structures” is insufficient to make out a *prima facie* case of obviousness of any claimed invention because it does not address the issue of proper motivation to modify the reference on which the rejection is based. In other words, even if something is within the skill level of one of ordinary skill in the art to make us use, is irrelevant to the issue of whether the Office Action has provided objective factual evidence that one of ordinary skill in the art would have the proper motivation to modify the base reference, as suggested. This aspect of the Office Action completely fails to even address the proper motivation issue, and also

does not provide any objective factual evidence, let alone sufficient objective factual evidence to make out a *prima facie* case of proper motivation to modify Jenkins as suggested in this rejection of claims 1-4, 19 and 20.

Furthermore, even though the Office Action does contain a “motivation” statement, Applicants respectfully submit that it is improper for reasons discussed above.

Additionally, the Office Action’s position in this regard is completely at odds with established precedential case law of the Court of Appeals for the Federal Circuit. As stated by the Federal Circuit in In re Ochiai, 71 F.3d 1565, 1572, 37 USPQ2d 1127, 1133 (Fed. Cir. 1995), “reliance on *per se* rules of obviousness is legally incorrect and must cease.” In other words, applicants respectfully submit that this statement that “substitution of known structures is obvious” is incorrect and is an improper “*per se*” rule of obviousness proscribed by the court that rendered the decision referenced in the rejection.

Accordingly, the Office Action has not made out a *prima facie* case of proper motivation to modify Jenkins, as suggested, or to otherwise arrive at a modified version of Jenkins that would render the claimed invention obvious.

Additionally, as noted above, during the aforementioned interview, Examiner Husband indicated that the motivation to modify Jenkins in view of Charland was overcome by Applicants’ arguments.

Thus, reconsideration and withdrawal of this rejection of claims 1-4, 19 and 20 are respectfully requested.

Claim 5-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jenkins in view of Charland as applied in the rejection of claims 1-4, and further in view of U.S. Patent 5,491,857 to Love. This rejection is respectfully traversed.

Complete discussions of the Examiner's rejections are set forth in the Office Action, and are not being repeated here.

Initially, the Jenkins-Charland reference combinations fail to render obvious the invention recited in claims 1 and 2, from which claims 5-7 depend.

Moreover, Love is extremely non-analogous art and has not been shown to be directed to solving the same type of problem facing Jenkins or either alternative reference combination.

Love is directed to using a flat spray nozzle 100 shooting a high pressure sheet of water against the back of a continuously moving web of pile fabric to remove pile distortions in the fabric web – see col. 4, lines 10-55, for example. This has not been demonstrated in the Office Action to be even remotely related to using a nozzle to spray steam into a washing machine to wash, for example, individual garments or fabric pieces. In fact, the Office Action fails to present any argument whatsoever, let alone required objective factual evidence in support thereof, to explain why one of ordinary skill in the art would be motivated to look to a machine that sprays pressurized water on continuous fabric webs to remove pile distortions in the fabric web to design or modify the design of a spray nozzle for a washing machine.

Additionally, Applicants respectfully submit that one of ordinary skill in the art would have no motivation to radically redesign Jenkins, the base reference, to replace its perforated pipes E with their unique shapes with a nozzle like that of Love, which is designed for an entirely different

purpose than spraying steam into a washing machine, where pile distortions in a finished carpet are not shown to be an issue or even feasible to obtain. In this regard, the operating pressures of Love, including up to pressures of 600 p.s.i.g, have not been demonstrated as being useful or even workable in a washing machine.

Additionally, as noted above, during the aforementioned interview, Examiner Husband indicated that the motivation to modify Jenkins in view of Charland was overcome by Applicants' arguments.

Accordingly, the Office Action fails to make out a *prima facie* case of obviousness of the invention recited in claims 5-7 and reconsideration and withdrawal of this rejection of claims 5-7 are respectfully requested.

#### **Additional Cited Reference**

Because the remaining reference cited by the Examiner in the outstanding Office Action has not been utilized to reject the claims, but has merely been cited to show the state of the art, no comment need be made with respect thereto.

#### **Conclusion**

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response

has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

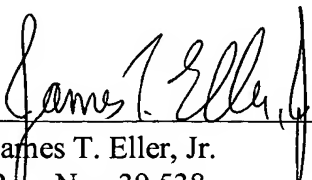
If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Robert J. Webster, Registration No. 46,472, at (703) 205-8000, in the Washington, D.C. area.


Prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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